



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/018,757
Filing Date: March 20, 2002
Applicant: Aspar, et al.
Group Art Unit: 2813
Examiner: Laura M. Schillinger
Title: PROCESS FOR MAKING A THIN FILM BY APPLYING PRESSURE
Attorney Docket: 2541-000011

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RESPONSE AND PETITION FOR EXTENSION OF TIME

Sir:

In response to the Office Action mailed May 6, 2003, with a due date of August 6, 2003, please consider the remarks set forth below.

Applicant hereby petitions under the provisions of 37 C.F.R. § 1.136(a) for a three-month extension of time in which to respond to the outstanding Office Action and includes a fee as set forth in 37 C.F.R. § 1.17(a) with this response for such extension of time.

Claims 21-40 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the remarks contained herein.

Claims 21-40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Usenko et al. (U.S. Pat. No. '829). This rejection is respectfully traversed.

Usenko et al. discloses a separation process for silicon-on-insulator wafer fabrication. This process aims to solve disadvantages of the prior art processes, and mainly the stated disadvantage of the Bruel (USPN 5, 374,565) technique (see column 1, lines 17-45 and column 2, lines 10-21). That is, a roughness of the as-cut surface.

According to Usenko et al., the disadvantage of the Bruel technique results from the separation technique itself, that is, the thermal treating of a wafer assembly (see column 1, lines 24-45).

The process proposed by Usenko et al. excludes thermal treating and proposes other treatments to initiate the separation. This process proposes application of an energy source selected from the group consisting of ultrasound, hydrostatic pressure, hydrodynamic pressure, infrared light, mechanical, or combination thereof (see column 2, lines 52-58).

Usenko et al. teaches replacing the heat treating by another technique of providing energy to the layer of microcavities.

The problem solved by the present invention is to further weaken the implanted zone without inducing any blisters on the implanted surface of the original substrate (see the specification, page 5, lines 1-3). This is not the same surface as the as-cut surface described in Usenko et al. (see column 2, lines 10-12).

According to the present invention, the problem is solved by a combination of heat treatment and pressure application, as defined in claims 21-40. The pressure applied on the implanted face of the substrate renders this result possible by preventing the

formation of blisters on the implanted face and also by preventing some blisters from bursting, as can occur if there is no applied pressure (see the specification, page 10, lines 22-31).

The process according to the present invention permits attainment of very high weakening levels allowing, for example, to reduce the thermal amount necessary for the separation (see the specification, page 4, lines 17-19).


For the reasons outlined above, it is submitted that Usenko does not anticipate the claims of the present application.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: 31 OCT 2003

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